

REMARKS

Applicants respectfully request reconsideration of the present application in view of the foregoing amendments and in view of the reasons that follow.

Status of Claims:

Claims 10, 15, 21 and 26 currently being cancelled.

Claims 7-9, 12-14, 18-20 and 23-25 are currently being amended.

Claims 29-32 are currently being added.

This amendment and reply adds, cancels and amends claims in this application. A detailed listing of all claims that are, or were, in the application, irrespective of whether the claims remain under examination in the application, is presented, with an appropriate defined status identifier.

After adding, canceling and amending the claims as set forth above, claims 7-10, 12-15, 18-21, 23-26 and 29-32 are now pending in this application.

Claim Rejections – Written Description:

In the Office Action, claims 18-27 were rejected under 35 U.S.C. § 112, 1st paragraph, as failing to comply with the written description requirement, for the reasons set forth on page 3 of the Office Action. In reply, please refer to Figures 6-8 of the drawings, and the description of those figures in the specification, whereby a channel estimating apparatus 106 is an element of a transmitting apparatus 12. Accordingly, claims 18-27 do have written description support in the specification and the drawings.

Claim Objections:

In the Office Action, claims 8, 9, 13, 14, 19, 20, 24 and 25 were objected to, because the acronym “SNR” was not spelled out in the claims. Claims 8, 9, 13, 14, 19, 20, 24 and 25 have been amended to overcome this objection.

Claim Rejections – Prior Art:

In the Office Action, claims 7-16 and 18-27 were rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent Publication No. 2004/0052315 to Thielecke. This rejection

is traversed with respect to the presently pending claims under rejection, for at least the reasons given below.

Presently pending independent claim 7 now recites:

A receiver apparatus for receiving, by a plurality of receiver antennas, transmission signals transmitted from a transmitter apparatus by a plurality of transmitter antennas in a parallel manner and for estimating a channel matrix for causing the transmission signals to be related to received signals to demodulate the received signals based upon said channel matrix; the receiver apparatus comprising:

calculation means for calculating a physical amount so as to estimate a radio line quality with respect to each of signal series based upon only said channel matrix;

determination means for evaluating the radio line quality based upon the physical amount calculated by said calculation means so as to determine a transmission parameter in a next transmission operation by said transmitter apparatus with respect to each of the signal series;

transmission means for transmitting the transmission parameter determined by said determination means to said transmitter apparatus; and

detection means for detecting a change in the transmission parameter from the received signals with respect to each of the signal series,

wherein the transmission parameter is a modulation level in mapping.

In its rejection of claim 10, whereby the features of that claim are now included in claim 7, the Office Action asserts that paragraph 76, lines 1-22 of Thielecke teaches the features of that claim. Applicant respectfully disagrees. Namely, paragraph 76 of Thielecke describes that a transmitter can encode data into either QPSK or 16 QAM, or both, whereby a mutually superimposed transformer 23 is used to provide diversity encoding. However, this use of multiple encoding schemes at the transmitter in the system of Thielecke is not controlled by a transmission parameter of a modulation level in mapping sent by a transmission means of a receiver apparatus; **rather, the transmitter of Thielecke determines which data to encode as QPSK and which data to encode as 16 QAM without any 'modulation type' input from a receiver.**

Accordingly, presently pending independent claim 7, as well as the other presently pending independent claims under rejection that have been amended in a similar manner, are not anticipated by Thielecke.

New Claims:

New claims 29-32 have been added to recite features described on page 22, lines 7-9 and on page 25, lines 19-22 of the specification. In Thielecke, in contrast, information obtained by demodulating received signals is utilized in estimating a radio line quality.

Conclusion:

Since all of the issues raised in the Office Action have been addressed in this Amendment and Reply, Applicants believe that the present application is now in condition for allowance, and an early indication of allowance is respectfully requested.

The Examiner is invited to contact the undersigned by telephone if it is felt that a telephone interview would advance the prosecution of the present application.

The Commissioner is hereby authorized to charge any additional fees which may be required regarding this application under 37 C.F.R. §§ 1.16-1.17, or credit any overpayment, to Deposit Account No. 19-0741. Should no proper payment be enclosed herewith, as by a check being in the wrong amount, unsigned, post-dated, otherwise improper or informal or even entirely missing or a credit card payment form being unsigned, providing incorrect information resulting in a rejected credit card transaction, or even entirely missing, the Commissioner is authorized to charge the unpaid amount to Deposit Account No. 19-0741. If any extensions of time are needed for timely acceptance of papers submitted herewith, Applicants hereby petition for such extension under 37 C.F.R. §1.136 and authorize payment of any such extensions fees to Deposit Account No. 19-0741.

Respectfully submitted,

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